

Digital intercom system

Digital building intercom system

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Statement: The specification parameters of the product are subject to change without notice in order to improve the product quality. The company has the final right to interpret the relevant contents in the data

Digital TCP/IP (digital analog) building intercom system

an instruction manual

**Please read this instruction carefully before using the product
and keep it properly for future use**

Engineering installation specification

Precautions for installation environment

- The communication line shall avoid interference sources as much as possible to avoid image interference, noise and other phenomena during communication.
- The signal line shall be routed through the weak current well, and shall not be routed in parallel with the strong current (such as 220V residential power supply) or RF signal interference sources (such as power line, telephone line, transformer box, frequency converter, CATV, large signal audio line, etc.). If parallel routing is required, the distance shall be greater than 50CM, and the metal pipe shall be sleeved for grounding. If the above conditions are not violated, it is recommended to use suitable PVC pipes for separate wiring.
- The system high power supply AC220V shall be used separately if possible.
- Do not install the product in the place affected by the following environmental factors.
 - Moisture or rain
 - Direct sunlight
 - Mechanical shock or impact
 - Excessive dust
 - Noise
 - Heat source, such as radiator or ventilation duct
- If it cannot be avoided, corresponding protective measures shall be taken

Wiring wire requirements

- Super class 5 network cable or class 6 network cable must comply with international standards. For specific reference, the resistance of a single branch of the lower network cable: $100m \leq 10 \Omega \pm 2 \Omega$. The network cable transmission rate is above 100Mbps.
- RVV2 * 1.0mm² or above is used for power line and unlocking signal line.
- The optical fiber cable is determined by the purchase of optical fiber equipment.
- In wiring, it is necessary to refer to the wiring provisions of this manual, as well as the relevant provisions of the national standard GB50311-2007 Code for Engineering Design of Generic Cabling System.



This label is used to remind the user that there is dangerous voltage near the product. If it is too close, there will be a risk of electric shock.



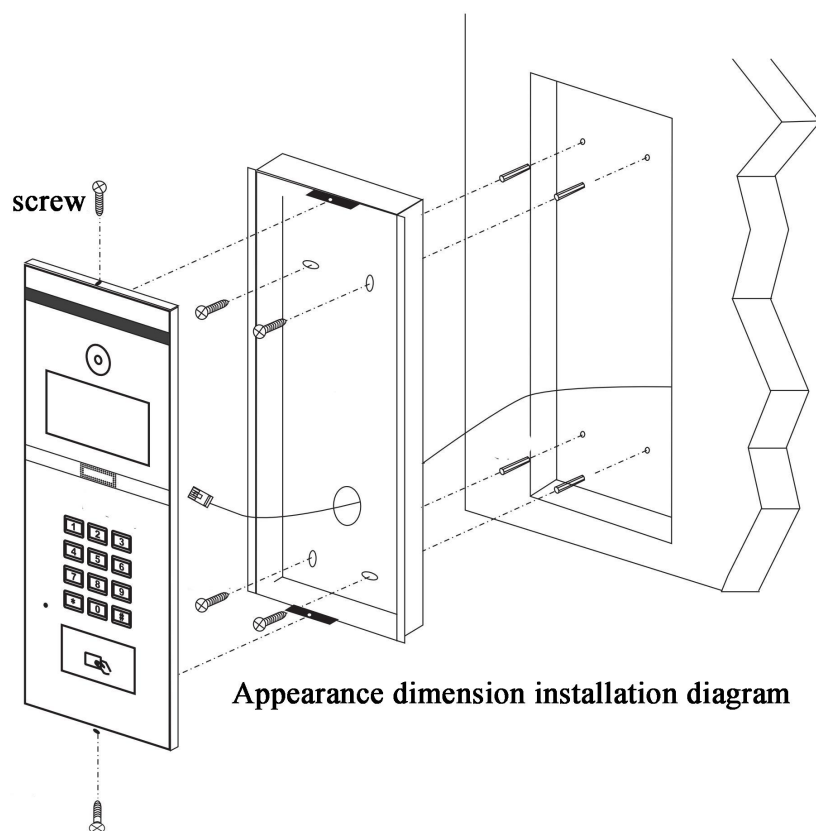
This label is used to remind the user of important operations: it is necessary to strictly follow this prompt to ensure the normal operation of the product.

Host Installation Instructions

Host installation

◆ Installation method

1. According to the appearance size of the host, an embedded groove shall be opened at an appropriate position on the wall or door.
2. Put the bottom cover of the host into the embedded slot, mark the slot according to the position of the fixing hole of the back cover, and drill holes.
3. Insert plastic expansion beads into each hole position in the embedded slot; Then bury the back cover into the embedded groove, and use the screws to fix in the hole.
4. Install the host panel into the bottom cover and fix it with screws from the upper and lower screw holes



◆ Installation precautions

- ① When opening the iron door or wall, the hole shall be opened according to the specific model of the host and the corresponding installation size.
- ② When embedding the rear cover of the host, pay attention to the control of the embedded depth. The depth shall be subject to the thickness of the exposed part of the host's face shell close to the horizontal plane of the iron door or wall. After the host is installed, there must be no excessive gap between the exposed part of the face shell and the iron door or wall.
- ③ Embedded installation mode, installed on the door that is not opened by the anti-theft door.
- ④ Do not install it in the environment of rain, humidity, high temperature, close to highly corrosive objects and excessive dust.
- ⑤ The installation height is 1400-1500mm above the ground with the lens as the center. (It is recommended that the installation height of the host should first consider the range of the camera's visual angle, so as to fully view the face, and please properly consider the visual height of the wheelchair.)

Functional technical parameters of face recognition host

Function: Call, voice call, monitor, unlock, unlock photo, IC/ID card, fingerprint unlock, face unlock, jpg.png.avi.mp4.wa format advertisement, QR code unlock, household password unlock, public password unlock, remote sharing unlock link, temporary password unlock, face fingerprint card extension and other unlock output ladder control signal, door magnetic alarm, remote upgrade and other functions.

CPU	Quad core ARMCortexA7 maximum operating frequency: 1GHZ
operating system	Android
Running memory	32bit 1GB DDR3
FLASH:	8G eMMC
Video compression format	H.264 1080P30fps
Audio compression format	G711 encoding and decoding
Format of picture video advertisement	jpg.png.avi.mp4.wav File size<100M
communication protocol	TIP/TCP
Choose one of six below the display	TFT color display 4.3 "(resolution 480 × 272) TFT color display 7-inch high-definition horizontal screen (resolution: 1024 × 600) TFT color display 7-inch high-definition vertical screen (resolution: 1024 × 600) TFT color display 10.1-inch high-definition horizontal screen (resolution: 1024 × 600) TFT color display 7-inch capacitive vertical touch screen (resolution: 1024 × 600) TFT color display 10.1-inch capacitive vertical touch screen (resolution: 1208 × 800)
Operating mode	Mechanical key/capacitive touch key/capacitive touch screen TP/optical touch key
Ring	Electronic ring tone>70dB
camera	1080P
working voltage	DC15V~DC18V
Maximum power consumption	<5W
working temperature	-35°C ~+60°C
Operating humidity	10%~95%
The unlocking output signal	Switching signal/power off unlocking/power on unlocking
Unlock mode	Indoor unit, security machine, management center, access card, fingerprint, face, QR code unlocking, remote sharing, temporary password, public password, household password and other unlocking methods (ID card/IDC card/encryption card is optional)
Card number capacity	Not less than 10000 sheets
Face capacity	Not less than 10000 sheets
False face recognition rate	<0.001%
Face rejection rate	<0.1%
Fingerprint capacity	MAX 3000 PCS
Fingerprint false recognition rate	<0.001%
Fingerprint rejection rate	<0.1%
Fingerprint resolution	508dpi
Fingerprint response time	<1S

Wiring Diagram of Digital TCP/IP Building Intercom System

notes

- ① The POE switch of the system extension is in the non-standard POE voltage range (15V~20V)
- ② The unit convergence switch and central switch are configured according to the actual situation on site
- ③ The network cable adopts Class V oxygen free copper network cable, and the single branch resistance of the network cable is 100 meters $10\Omega \pm 2\Omega$
- ④ The specification of optical fiber cable depends on the optical fiber equipment purchased
- ⑤ Definition of single network cable: 1.2.3.6 refers to communication, 4.5 refers to positive pole of power supply, and 7.8 refers to negative pole of power supply

Fibre Optical

Internet

Mobile APP

CAT-5 network cable

Central optical fiber switch

To aggregation switch of other units

More than 1000 households must use the Layer 3 switch.
It is recommended to use the H3C

LS-3600V2-28TP-EI (24 ports)

LS-3600V2-52TP-EI (48 ports)

The following multicast protocols are supported:

IGMP Snooping

IGMP V1/V2, PIM-SM, PIM-DM, MSDP

Fibre Optical

CAT-5 network cable

CAT-5 network cable

Pc server

Management center machine

If the management computer is installed to another sentry box, optical fiber cables shall be laid

points for attention

1. All the cabling of the system adopts standard super five class network cables or optical fibers;
2. The maximum cabling distance between equipment is 75 meters. If the cabling range is exceeded, optical fiber transmission must be used;
3. This system adopts star wiring, that is, pyramid layout. The number of layers of the switch cannot exceed four
4. The switch equipment in the building can be changed according to the actual situation. For example, if the unit building is a one elevator four household type, the floor switch can be a two-layer one switch, a two-layer one switch, or a multi-layer one switch
5. The customer shall configure the power supply according to the actual situation. Generally, a 12V5A power supply can be connected to 8 extension units, or it can be powered by non-standard POE, or it can be connected to an external 2-core power cord

CAT-5 network cable

The host can adopt different wiring methods according to the actual situation
Generally, there are three types of network cable to core switch
A. PBX Switch B. Fiber to core C. Network cable to nearby Layer 2 switch
Mode B is the most commonly used mode

RVV2×1.0 Sheathed wire Host power supply

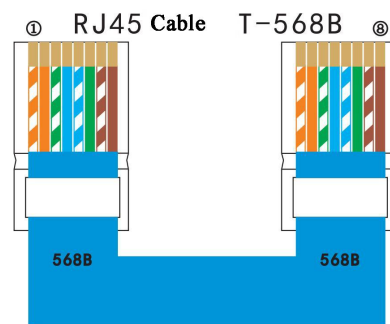
RVV2×1.0 Sheathed wire Access control power supply

Digital host

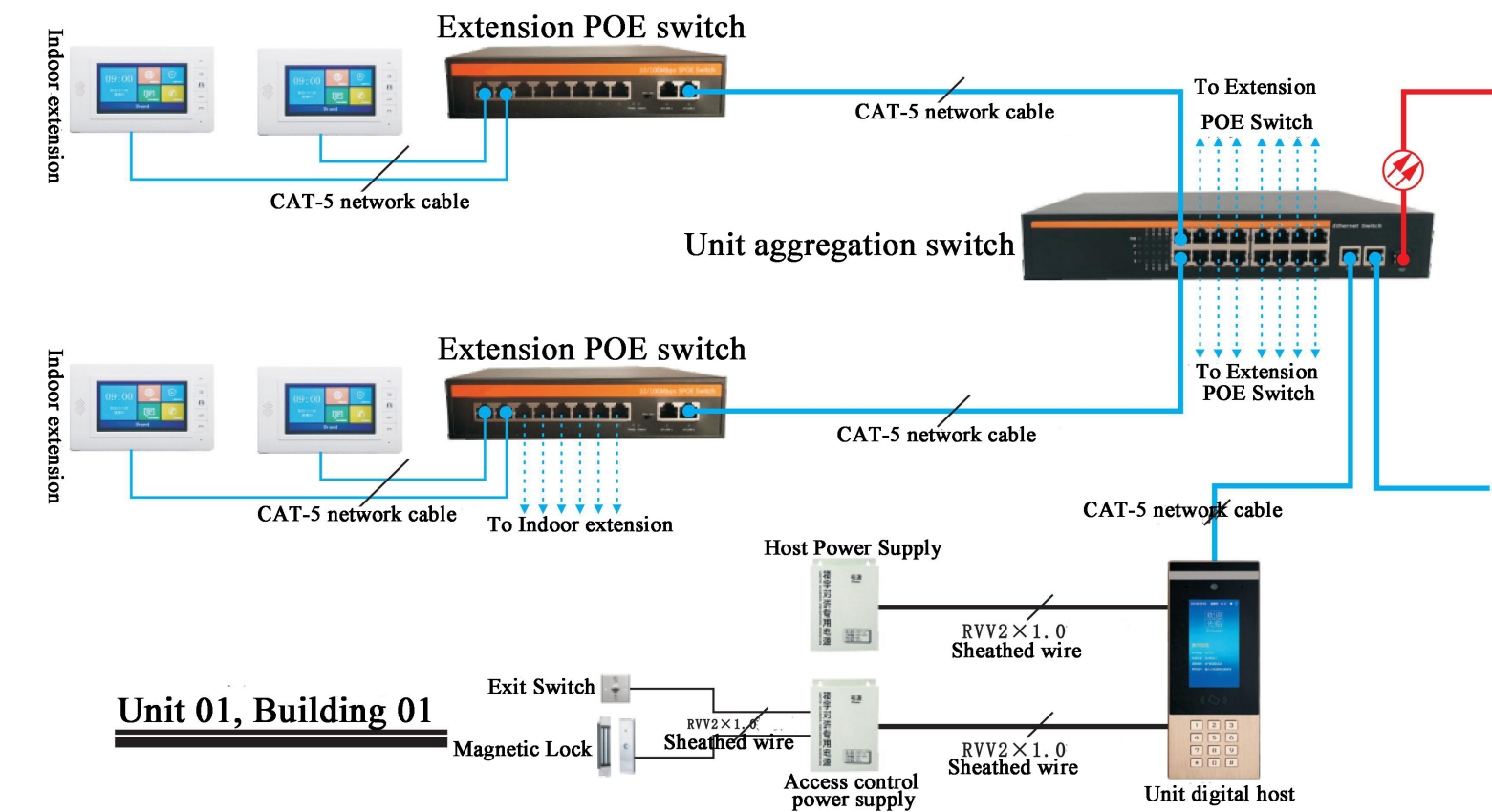
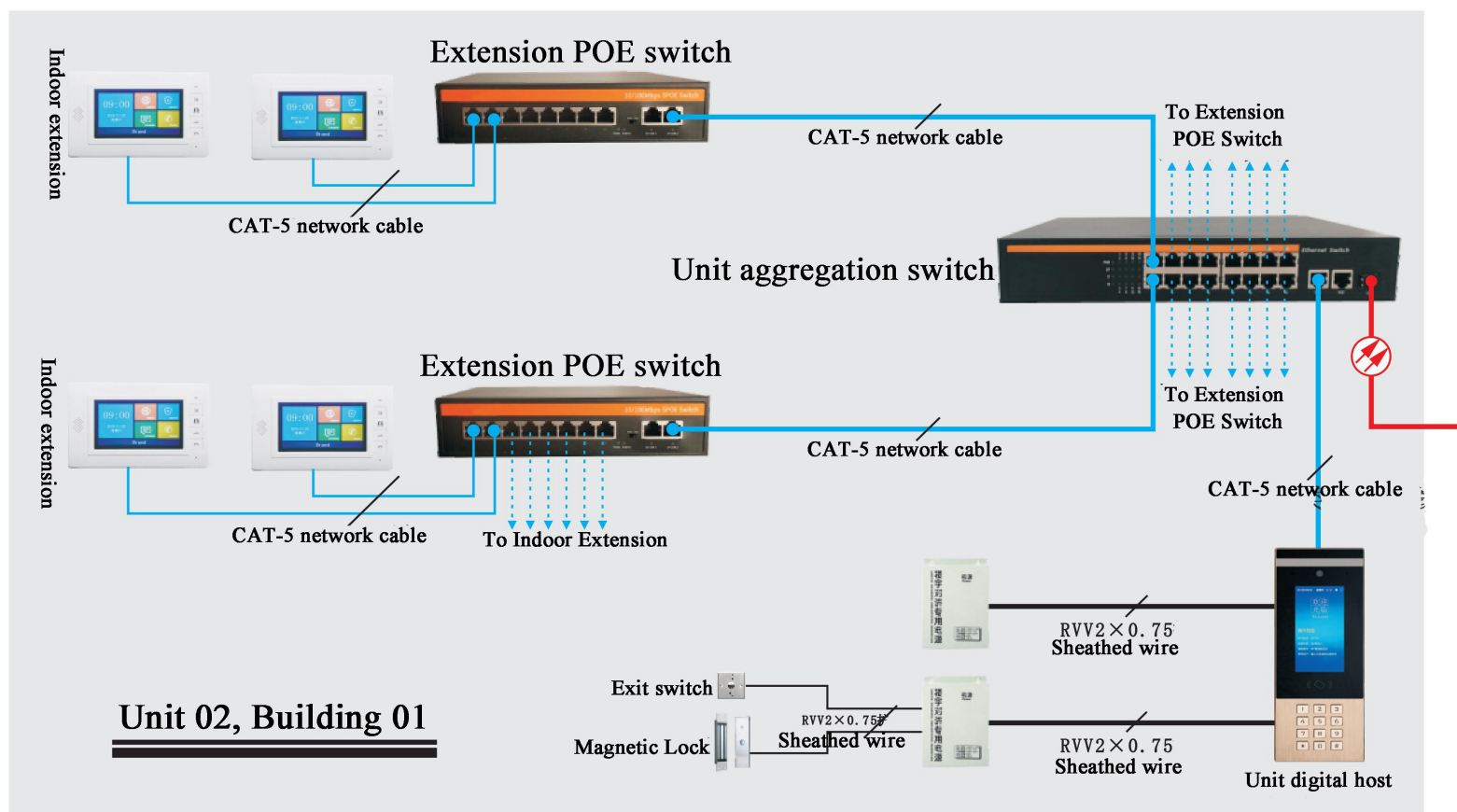
Access control power supply

Exit switch

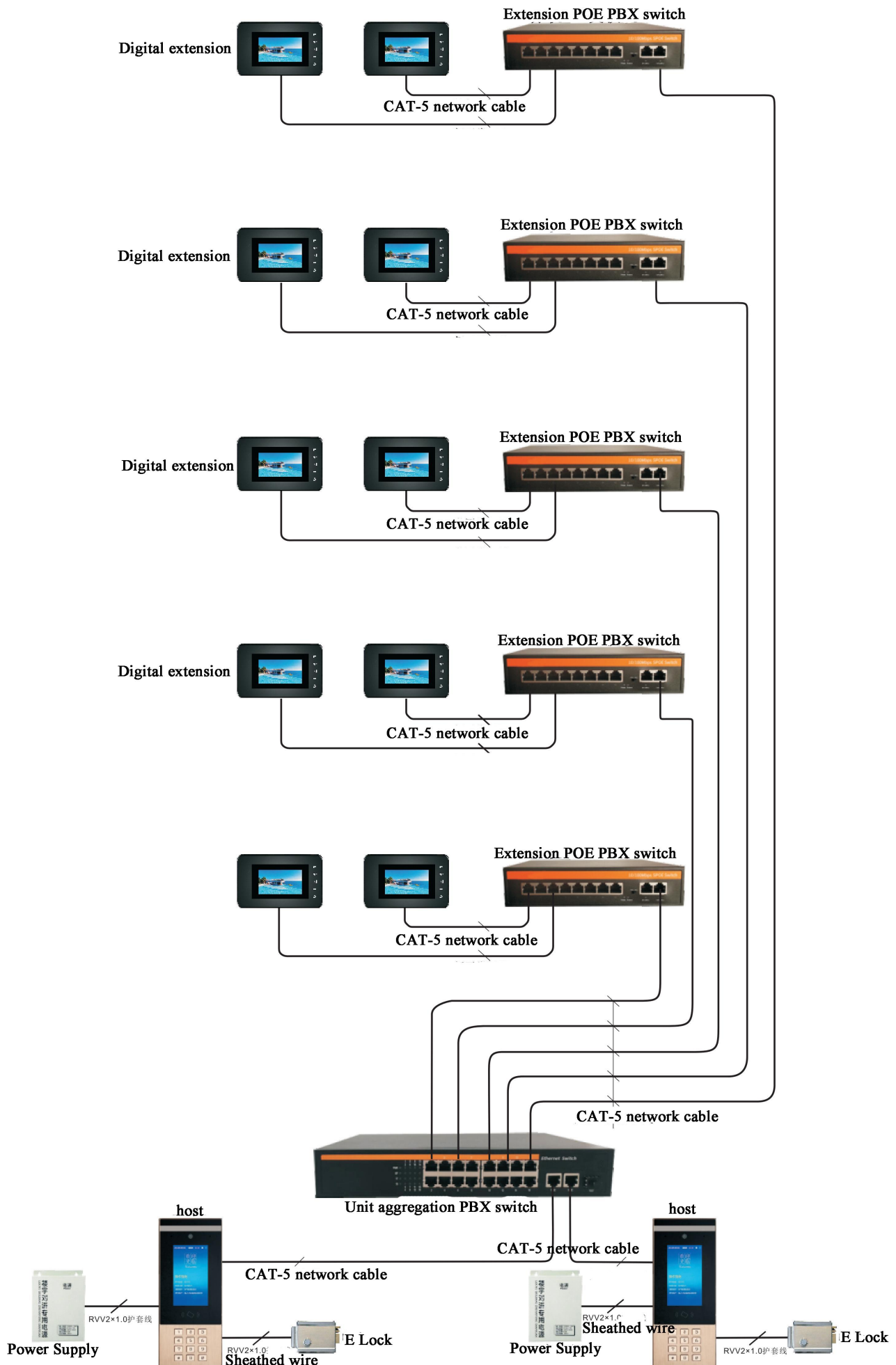
Magnetic lock



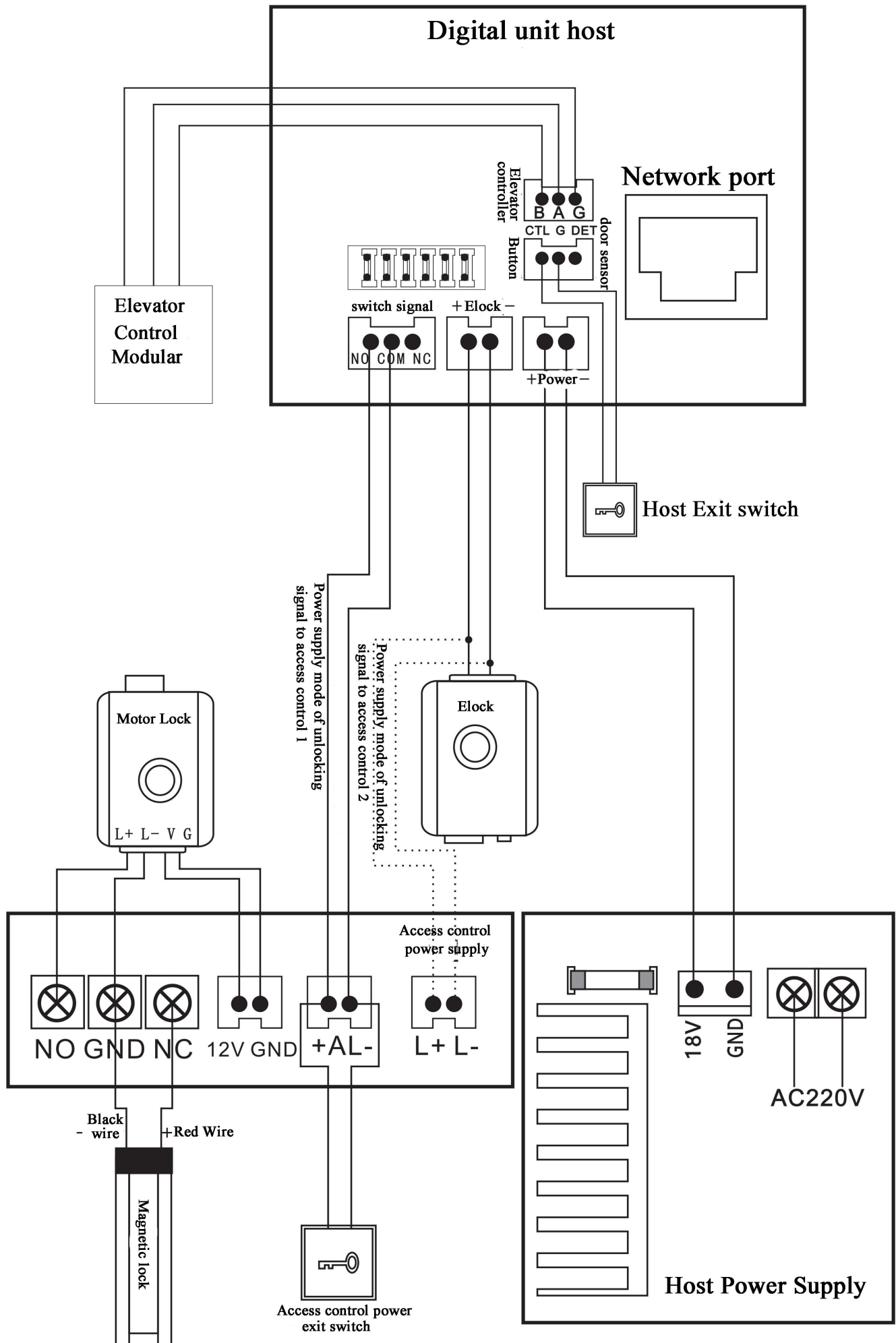
NO	①	②	③	④	⑤	⑥	⑦	⑧
COLOR	white	orange	orange	green	blue	white	green	brown



Wiring diagram of independent unit of digital system



Internal wiring of digital unit host



Description of power supply and lock connection of digital unit host

1. The digital host has two power supply modes,

- ① Independent power interface power supply
- ② Switch POE power supply

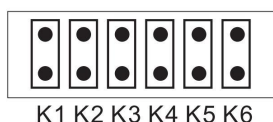
Mainframe access voltage range DC15V~DC18V

When the host is powered by POE, an additional access control power supply is required to connect various locks such as electric control lock or magnetic lock

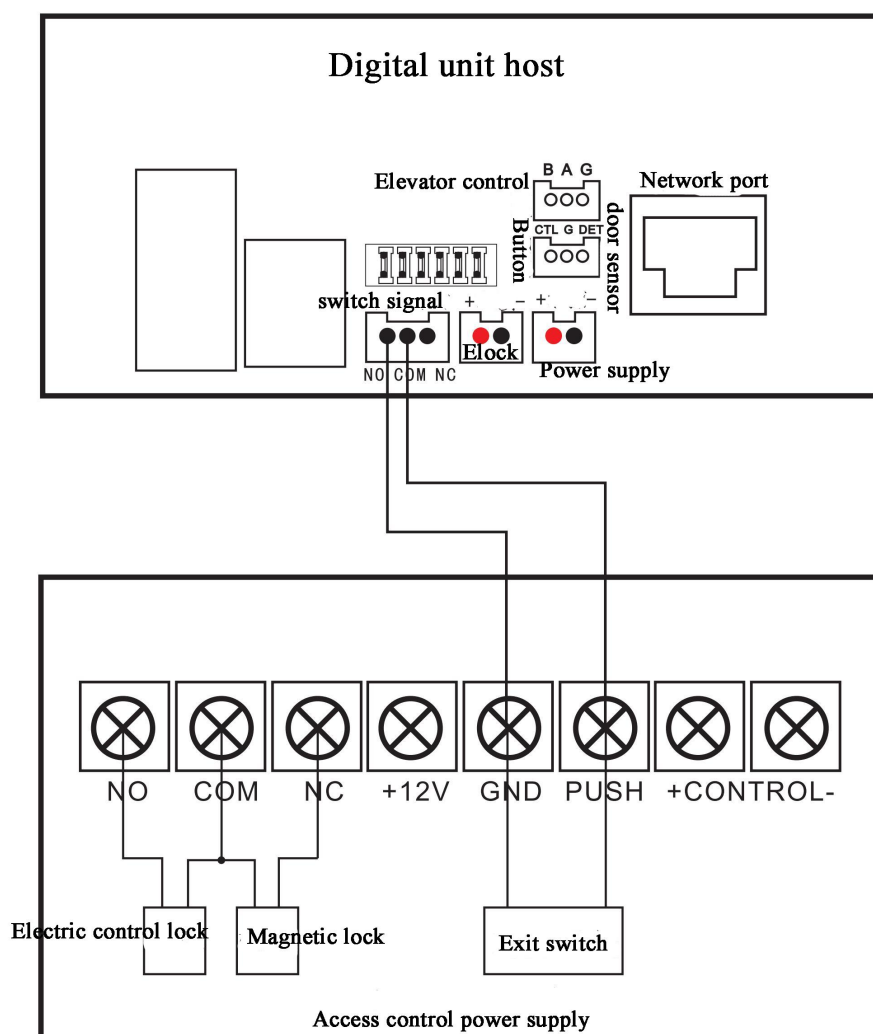
When the host is powered by independent power supply, the switching power supply current is $\geq 2A$, and the linear power supply current is $\geq 3A$

2. Needle skipping setting of unlocking mode

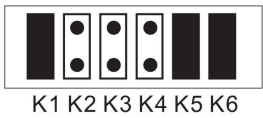
1. When the host is unlocked using the switch signal port



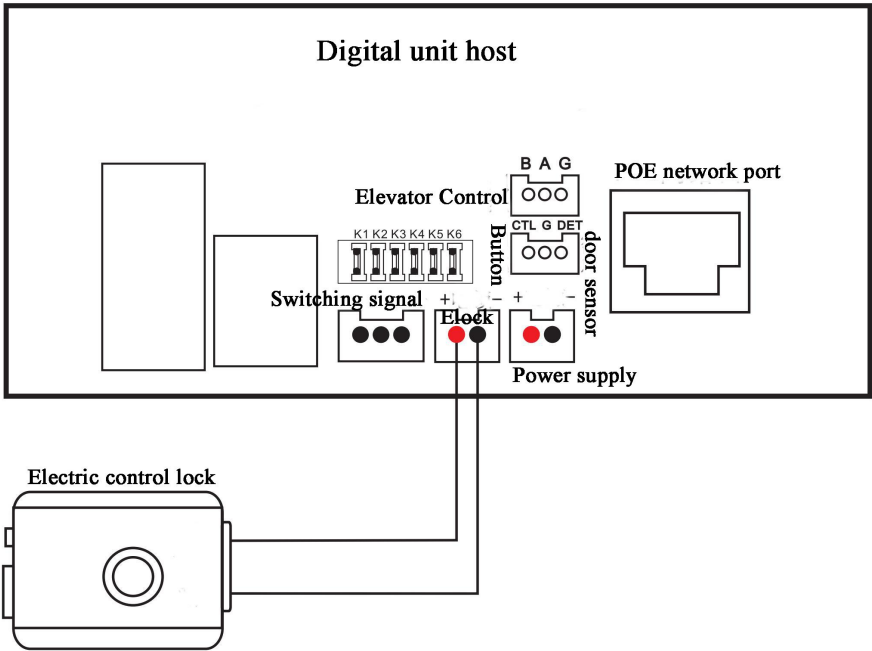
When the host machine uses the on-off signal: unlock the needle cap to connect K1, K2, K3, K4, K5, K6



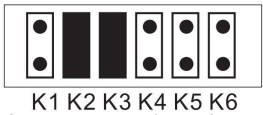
2. When the electric lock port of the host is connected to the electric lock:



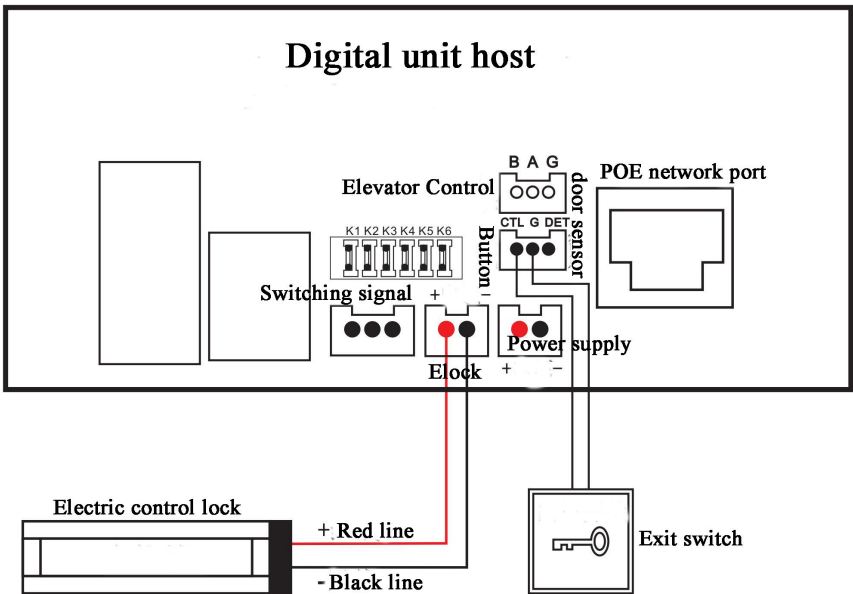
When the electric lock port of the host is connected to the electric lock: set the needle cap to short circuit K1, K5, K6, and set the "unlock setting" function of the host to power on and unlock, and the unlock delay is customized



3. When the electric lock port of the host is connected to a magnetic/electric plug lock:



When the electric lock port of the host is connected to the magnetic lock: the needle cap is set to be short circuited to K2 and K3 for unlocking. The "unlock setting" function of the host is set to power off and unlock. The unlock delay is customized. The exit switch is connected to the "buttons CTL and G" of the host



Host Setting Instruction

Quick Setting Instructions for Full Digital (Digital Analog) System Host

Press "# 3" on the host to enter a 6-digit password (factory default password 666666), press "#" to enter programming, press "4" to turn left or "6" to turn right to select the function items to be set, and press "#" to enter the setting after selecting

Set Items	Setting Steps					Remarks		Device model function support	
								X1H Dhost	X7 Face Dhost
Address setting	1. Press the "*" key to clear the old address code 2. Enter a new 13 digit address code 3. Press the "#" key to confirm					changing the host address information		support	support
		2	01	01	01	01	01	01	
		Host NO.	District NO.	Building NO.	Unit NO.	Room NO.	Extension NO.		
Administrator Password	1. Enter the old 6-digit management password 2. Enter a new 6-digit management password 3. Re enter the new 6-digit administrator password 4. Press "#" to confirm and "*" to exit					Change administrator password		support	support
Password permission	1. Press "4" to activate, press "6" to prohibit 2. Press "#" to confirm					Enable or disable the user (public) password unlocking function		support	support
Lock code	1. Enter a new 6-digit password and press the "#" key 2. Repeat the 6-digit password and press the "#" key					Set this password as a public password. The password cannot be the same as the administrator password		support	support
Volume Setting	1. Press "0", "1", "2" to select the volume type 2. Press "4" to decrease the volume, and press "6" to increase the volume 3. Press "#" to confirm and "*" to exit					Change the volume of calls, ringing and advertisements		support	support
Unlock setting	1. Press "0" and "1" to select the unlocking type 2. Press the next item "#" to enter the desired unlock delay time 3. Press "#" to confirm and "*" to exit					When the unlock signal is connected to the host "+electric lock -", change the signal output type when unlocking, and power on or off the interface to unlock		support	support
Door magnet setting	1. Press "0" "1" to disable or enable the door magnet 2. Press the next item "" # "" to enter the delay time you want to set 3. Press "#" to confirm and "*" to exit							support	support
Language Settings	1. Press "0" "1" "2" to select the language type 2. Press "#" to confirm and "*" to exit							support	support
Date Time	1. Press "0" "1" to select the status (automatic or manual) 2. When selecting manual adjustment, press "*" to delete, and press "#" 3. After setting, press "#" to confirm, and press "*" to exit confirmation					Automatic or manual clock adjustment is supported. When automatic adjustment is selected, the device must be connected to the server		support	support

Card Management	add card	1. Press "1" to select add card 2. Enter 4-digit room number (add "0" before less than 4 digits and press "#" 3. Put the card in the card swiping area 4. Add successfully Press "*" to exit		support	support
	Delete Card	1. Press "" 2 "" to select card deletion 2. Press "1", "2" and "3" to select the card deletion method 3. Press "#" to confirm deletion 4. Press "*" to exit and return			
Reset to factory version	1. Press "" # "" to confirm the factory restoration and wait for the host to restart			support	support
Cloud intercom	1. Press "0" "1" to disable or enable 2. Press "#" to confirm and move to the next setting item 3. Press "#" to confirm and "*" to exit			support	support
Face Settings	set up	1. Press " 4 " or " 6 " to open or disable 2. Press " # "to confirm and move to the next setting item 3. After setting, press " # " to confirm and " * " to exit	Enable or disable face function, enable or disable live status, enable or disable user registration status	support	
	register	1. Quick registration: press "# 8" to enter the registration status when the host is in standby mode 2. Put the card in the card swiping window. Swipe the card to enter the entry window 3. Adjust face alignment recognition window and press "#" to register			
	Card free registration	1. Press "4" or "6" to select registration Press "#" to enter interface for card swiping registration 2. Press "#" to enter the card free face interface, enter 4 digits and press "#" to create, enter 2 digits of serial number and press "#" to create the entry window 3. Adjust face alignment recognition window and press "#" to register	10 digits (two digit area code +two digit building number +two digit unit number +four digit room number) are required for face capture machine or enclosure machine without card		
	delete	1. Press "5" to select face deletion 2. Press "1", "2" and "3" to select the face deletion method 3. Press "#" to confirm deletion 4. Press "*" to exit and return to 1. Select synchronization, press "#" and wait for synchronization			
	synchronization	1. Select Synchronization Press "#" and wait for synchronization	The synchronization function must be connected to the server, otherwise the synchronization fails		
Fingerprint Settings	Fingerprint permission	1. Press "4" or "6" to open or disable 2. Press "#" to confirm and move to the next setting item 3. After setting, press "#" to confirm and "*" to exit		support	support
	Fingerprint synchronization	1. Select Synchronization Press "#" and wait for synchronization	The synchronization function must be connected to the management software server, otherwise the synchronization fails		
	Register Fingerprint	1. Quick registration: press "# 2" when the host is in standby mode to enter the registration status 2. Put the card in the card swiping window. Swipe the card to enter the entry window 3. Place the fingerprint on the fingerprint reader, and the input is successful for three consecutive times			

Fingerprint Settings	Card free registration	1. Press "4" or "6" to select registration and press "#" to enter the card swiping registration window 2. Press "#" to enter the card free fingerprint input interface, enter 4 digits and press "#", enter 2 digits of serial number and press "#" to enter the input window 3. Place the fingerprint on the fingerprint acquisition head (3 times of acquisition) and prompt that the process is complete 4. Press the "*" key to exit	(two digit area code+two digit building number+two digit unit number+four digit room number)10 digits are required for face capture machine or enclosure machine without card	SUPPORT	SUPPORT
	Delete fingerprint	1. Press "1", "2" and "3" to select the fingerprint deletion method 2. Press "#" to confirm deletion 3. Press "*" to exit			
advanced setting	Hang up after unlocking the intercom	Press "#" to activate or disable conversion	Press "2" to turn up and "8" to turn down		SUPPORT
	Ring time	1. Press "#" to enter the setting after selection 2. Press "*" to delete the value and enter the value you want to modify 3. Enter the value and press "#" to confirm			
	Talk time	1. Press "#" to enter the setting after selection 2. Press "*" to delete the value and enter the value you want to modify 3. Enter the value and press "#" to confirm			
	Backup mode	Press "#" to activate or disable conversion			
	Video circular preview	Press "#" to activate or disable conversion			
	Show face box	Press "#" to activate or disable conversion			
	Sleep time	1. Press "#" to enter the setting after selection 2. Press "*" to delete the value and enter the value you want to modify 3. Enter the value and press "#" to confirm			
	Tamper alarm	Press "#" to activate or disable conversion			
	DNS address	1. Press "#" to enter the setting after selection 2. Press "*" to delete the value and enter the value you want to modify 3. Enter the value and press "#" to confirm			
	Authorization server address	1. Press "#" to enter the setting after selection 2. Press "*" to delete the value and enter the value you want to modify 3. Enter the value and press "#" to confirm			
	restart	Press "#" to confirm and wait for the device to restart			